Claims

What is claimed is:

1. In a telecommunications signaling network comprising a sending peer that sends sequenced data messages to an associated receiving peer, a method of carrying out a recovery action upon the peers becoming out of synchronization with one another, said method comprising:

(a) sending a poll message from the sending peer to the receiving peer, said poll message indicating a sequence number for a sequenced data message to be sent next;

(b) returning a response to the poll message from the receiving peer to the sending peer, said response indicating that the sequence number indicated in the poll message is the one expect next by the receiving peer or indicating an error when the sequence number indicated in the poll message is not the one expect next by the receiving peer, as the case may be; and,

(c) entering into a recovery action state upon the response to the poll message indicating an error, wherein while in said recovery action state selected sequenced data messages received by the receiving peer from the sending peer subsequent to entry into the recovery action state are buffered by the receiving peer.

2. The method of claim **1**, wherein the sending peer and receiving peer are Service Specific Connection Oriented Protocol (SSCOP) entities.

3. The method of claim **1**, further comprising:

passing sequenced data messages that are buffered by the receiving peer up to a user at the receiving end.

4. The method of claim **1**, further comprising:

tracking at the receiving peer the sequence number of the sequenced data message expected to be received next; and,

while in the recovery action state, determining if a sequenced data message received by the receiving peer subsequent to entry in the recovery

action state has a sequence number less than the sequence number being tracked, such that if it is less, then the subsequently received sequenced data message is not buffered.

5. In a telecommunications signaling network comprising a sending peer that sends sequenced data messages to an associated receiving peer, a system for carrying out a recovery action upon the peers becoming out of synchronization with one another, said system comprising:

means for sending a poll message from the sending peer to the receiving peer, said poll message indicating a sequence number for a sequenced data message to be sent next;

means for returning a response to the poll message from the receiving peer to the sending peer, said response indicating that the sequence number indicated in the poll message is the one expect next by the receiving peer or indicating an error when the sequence number indicated in the poll message is not the one expect next by the receiving peer, as the case may be; and,

means for entering into a recovery action state upon the response to the poll message indicating an error, wherein while in said recovery action state selected sequenced data messages received by the receiving peer from the sending peer subsequent to entry into the recovery action state are buffered by the receiving peer.

6. The system of claim **5**, wherein the sending peer and receiving peer are Service Specific Connection Oriented Protocol (SSCOP) entities.

7. The system of claim **5**, further comprising:

means for passing sequenced data messages that are buffered by the receiving peer up to a user at the receiving end.

8. The system of claim **5**, further comprising:

means for tracking at the receiving peer the sequence number of the sequenced data message expected to be received next; and,

while in the recovery action state, means for determining if a sequenced data message received by the receiving peer subsequent to entry in the recovery action state has a sequence number less than the sequence number being tracked, such that if it is less, then the subsequently received sequenced data message is not buffered.

9. A telecommunications signaling network comprising:

a first node that transmits sequenced data messages in a set order and periodically interspersed therewith poll messages indicating a sequence number of a next sequenced data message to be transmitted;

a second node in operative communication with said first node to receive the sequenced data messages transmitted therefrom and response to the poll messages, each response to each poll message indicating that the sequence number indicated in the poll message is the one expect next by the second node or indicating an error when the sequence number indicated in the poll message is not the one expect next by the second node, as the case may be, said telecommunications signaling network entering a recovery state upon a response indicating an error, said recovery state operative to synchronize the first and second nodes with one another; and,

a buffer, wherein while in said recovery state, selected sequenced data messages received by the second node subsequent to entering the recovery state are saved in the buffer.

10. The network of claim **9**, wherein the first and second nodes are Service Specific Connection Oriented Protocol (SSCOP) entities.